was applied to the nostrils, and a small sponge was carried down to the epiglottis, in order to remove any mucus and to endeavour to excite coughing—the thorax being at the same time rubbed, and sometimes dashed with cold water. These means might have been employed for two or three minutes, when a further change in the child's condition was observable. The pulse had now quite ceased, the countenance was that of a corpse, and the lower jaw had dropped. When the eyelids were separated to examine the pupils (which were dilated), they remained gaping. As no time was, evidently, to be lost, the author had recourse to artificial respiration. He did not endeavour to induce this, however, by the insufflation of air, regarding that as a very uncertain procedure. The methodical compression of the abdomen is a much better one, and was executed. While an assistant compressed the abdomen with both his hands beneath the navel, in order to prevent the viscera receding below, the author pressed the upper portion of the abdominal walls towards the diaphragm, removing the hands then immediately, in order to allow of the expansion of the lungs. This rhythmical procedure was kept up for about three minutes without any appreciable advantage. A complete relaxation of the diaphragm, in fact, existed, as there was neither resistance offered by it to the passage of the hand or any subsequent vaulting of the epigastrium. It was now resolved to Faradize the diaphragm, in order to induce its contraction. One of the conductors of Bois Reymond's induction apparatus was applied over the phrenic nerve (where the omohyoïdeus lies at the outer edge of the sterno-cleido-mastoïdeus), and the other to the seventh intercostal space, pressing this latter deeply towards the diaphragm. The Faradization was performed sometimes on one side and sometimes on the other, the stream being interrupted ten times on the contraction of the diaphragm giving rise to vaulting of the epigastrium, a short sob occurring at the same time. The Faradization being now suspended, a slight spontaneous inspiration occurred, which was followed by a second and third, and a temporary reddening of the face, the pulse also becoming perceptible. Compression of the abdomen was again resorted to, the tension of the diaphragm not offering its proper resistance. The attempt to suspend the compression at the end of ten minutes of its employment was attended with an immediate enfeeblement of the respiration and pulse. It was therefore resumed for another ten minutes, the extremities being also rubbed, the face sprinkled with water, and ammonia applied to the nose. The recovery at last became so complete, that the operation was proceeded with, and the child did very well.—*Med. Times and Gaz.*, Feb. 25, from *Virchow's Archiv.*, Bd. xvi.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

27. *Acupressure—A New Method of Arresting Surgical Hemorrhage.*—At the first winter meeting of the Royal Society of Edinburgh (Dec. 19, 1859), Prof. J. Y. SIMPSON made a lengthened communication on acupressure, as a new mode of arresting surgical hemorrhage. After describing the various methods of staunching hemorrhage in surgical wounds and operations, which the Greek, Roman, Arabic, and Mediæval surgeons employed, he gave a short history of the introduction of the ligature of arteries, and spoke of it as the hæmostatic means almost universally employed in chirurgical practice at the present day. But he thought that surgery must advance forward a step further than the ligature of arteries—particularly if surgeons expected, as seemed to be their unanimous desire, to close their operative wounds by primary adhesions of their sides, or by union by the first intention.

Dr. Simpson stated that he had tested the effects of acupressure as a means of effectually closing arteries and staunching hemorrhage first upon the lower animals, and lately in two or three operations on the human subject. The instruments which he proposed should be used for the purpose, were slender needles or pins of passive iron, headed with wax or glass, and in other respects also like the hare-lip needles commonly used by surgeons at the present day, but longer when circumstances require it. They might be coated with silver or zinc on the surface, if such protection were deemed requisite.

At first, Dr. Simpson believed that in using acupressure as a hæmostatic means, it would be necessary to compress the tube of the bleeding artery between two needles, one placed on either side of it. But in his later experiments upon the living as well as the dead body (as in amputations on the latter, and subsequently injecting tepid water through the arteries, in imitation of the flow of blood), he had found that the compression of one needle was usually perfectly sufficient to shut up an artery, and that even sometimes, when two or more bleeding points were near, they could be closed simultaneously by the action of one needle or pin. The whole process consists in passing the needle *twice* through the substance of the wound, so as to compress together and close, by the middle portion of the needle, the tube of the bleeding artery a line or two, or more, on the cardiac side of the bleeding point. The only part of the needle necessarily left exposed on the fresh surface of the wound is the small middle portion of it, which passes over and compresses the arterial tube; and the whole needle is withdrawn on the second or third day, or as soon as the artery is supposed to be adequately closed, thus leaving *nothing* whatever in the shape of a foreign body within the wound, or in the tissues composing its sides or flaps. To produce adequate closing pressure upon any arterial tube which it is desired to constrict, the needle must be passed over it so as to compress the tube with sufficient power and force against some resisting body. Such a resisting body will be most frequently found, 1st, in the cutaneous walls and component tissues of the wound; 2d, sometimes in a neighbouring bone, against which the artery may be pinned and compressed by the acupressure needle; and 3d, in a few rare cases it may possibly be found in practice, that a second needle may require to be introduced to serve as a point against which the required compression is to be made. Most commonly the first of these three plans seems perfectly sufficient, and that even in amputation of the thigh. In acting upon this mode, the surgeon may place the tip of the forefinger of his left hand upon the bleeding mouth of the artery which he intends to compress and close; holding the needle in his right hand, he passes it through the *cutaneous* surface of the flap, and pushes it inwards till its point project out to the extent of a few lines on the raw surface of the wound, a little to the right of, and anterior to his finger-tip; he then, by the actions of his right hand upon the head of the needle, turns and directs the needle, so that it makes a bridge as it were *across* the site of the tube of the bleeding artery immediately in front of the point of the finger, with which he is shutting up its orifice; he next, either with this same forefinger of the left hand, or with the side of the end of the needle itself, compresses the locality of the bleeding arterial orifice and tube, and then pushes on the needle with his right hand so as to make it *re-enter* the surface of the wound a little to the left side of the artery; and lastly, by pressing the needle further on in this direction, its point re-emerges through the *cutaneous* surface of the flap—and the site of the tube of the bleeding artery is in this way left pinned down in a compressed state by the arc or bridge of steel that is passed over it. The needle thus passes first from and through the skin of the flap *inwards* to the raw surface of the wound, and after bridging over the site of the artery, it passes secondly from the raw surface of the wound *outwards* again to and through the skin. Sometimes the needle will be best passed by the aid of the eye alone, and without guiding its course by the finger-tip applied to the bleeding orifice. It compresses not the arterial tube alone, but the structures also placed over and around the *site* of the tube. When the needle is completely adjusted, all of it that is seen on the surface of the raw wound, and that not necessarily so, is the small portion of it passing over the site of the artery, while externally, upon the cutaneous surface of the flap, we have remaining exposed more or less of its two extremities, namely, its point and its head. The rest of it is hidden in the structures of the flap or side of the wound. The degree of pressure required to close effectually the tube of an artery is certainly much less than medical practitioners generally imagine; but in the above proceeding the amount of pressure can be regulated and increased, when required, by the acuteness of the angle at which the needle is introduced and again passed out—the cutaneous and other structures of the flap serving as the resisting medium against which the needle compresses the arterial tube. But if it were ever, perchance, necessary to produce greater compression than can be thus accomplished by the needle alone, this increased pressure could be readily obtained by throwing around the two extremities of the needle exposed cutaneously a figure-of-eight ligature, as in hare-lip, with or without a small compress placed between the arc of the ligature and the skin. The process of the adjustment of the needle is difficult to describe shortly by words, but the whole of it is readily seen and imitated when repeated upon a piece of cloth or leather. We fasten the stalk of a flower in the lapelle of our coat by a pin passed exactly in this manner. To compress a bleeding artery against a bone is somewhat more complicated, but not much so. In accomplishing it, we have to introduce from the cutaneous surface a long needle through the flap of the wound obliquely to near the site of the artery, and then compressing, with the fingers of the other hand, or with the end of the needle, the part containing the artery against the bone, we make the needle, after passing over this compressed part, and after testing whether it has clothed the vessel or not, enter into the tissues beyond, and if necessary even emerge from, the cutaneous surface on the other side at an angle somewhat oblique to that at which it entered: thus taking advantage of the resiliency and resistance of the soft textures to make them push the needle with the necessary degree of compression against the artery and bone. Arteries in particular parts require special adjustments and modifications to compress them against the neighbouring bone, which only experience can point out. There is always sufficient soft tissue on either side of the artery for the needle to get a purchase upon, to compress the arterial tube against the bone or other resistant point. In two cases, Dr. S. had found that branch of the internal mammary artery which so frequently bleeds in the bottom of the wound after excision of the mamma, easily and perfectly closed by a needle passed through the flap to near the artery, then lifted over it and (after compressing it so as to stop the flow of blood) pushed onwards into the tissues beyond. Possibly, in some amputations, an acupressure needle or needles may yet be passed, immediately before the operation, half an inch or so above the proposed site of the amputation line, so as to shut the principal artery or arteries, and render the operation comparatively bloodless. If so, these needles would serve, at one and the same time, the present uses of both tourniquet and arterial ligatures. Perhaps this will be found, in some cases, a simple and effectual means of compressing and closing the artery leading to an aneurism —as the femoral artery, for example, in popliteal aneurism—changing the operation for that disease into a simple process of acupuncture instead of a process of delicate dissection and deligation, when in any case the milder methods of compression, manipulation, and continuous flexion of the limb fail. It has been hitherto a difficult problem to obstruct the vessels of the ovarian ligament in ovariotomy, without leaving a foreign body, whether clamp or ligature, upon the stalk of the tumour, to ulcerate and slough through it. If the stalk be transfixed and pinned in its whole breadth to the interior of the relaxed abdominal walls, by one or more acupressure needles passed through these abdominal walls from without, this difficulty may possibly be overcome.

That needles used for the purpose of acupressure, and passed freely through the walls and flaps of wounds will not be attended by any great degree of disturbance or irritation, is rendered in the highest degree probable by all that we know of the tolerance of living animal tissues to the contact of metallic bodies. Long ago John Hunter pointed out that small-shot, needles, pins, etc., when passed into and imbedded in the living body, seldom or never produced any inflammatory action, or none at least beyond the stage of adhesive inflammation, even when lodged for years. Some time ago, when the subject of acupuncture specially attracted the attention of medical men, Cloquet, Pelletan, Pouillet, and others, showed that the passage and retention of long acupuncture needles was attended with little or no irritation in the implicated living tissues. The reviewer of their works and experiments in the *Edinburgh Medical Journal* for 1827 observes, "It is a *remarkable* circumstance that the acupuncture needles never cause inflammation in their neighbourhood. If they are rudely handled or ruffled by the clothes of the patient, they may produce a little irritation; but if they are properly secured and protected, they may be left in the body for an *indefinite* length of time without causing any of the effects which usually arise on account of the presence of foreign bodies. In one of M. Cloquet's patients, they were left in the temples for eighteen days; and in cases in which needles have been swallowed, they have remained without causing inflammation for a much longer period. It appears probable, from the facts collected on the subject, that metallic bodies of every kind may remain imbedded in the animal tissues without being productive of injury." (p. 197.) All the late observations and experiments upon metallic sutures are confirmatory of the same great pathological law of the tolerance of living tissues for the contact of metallic bodies imbedded within their substance. In the operation for hare-lip, where the whole success or failure of the operation depends on the establishment or not of union by the first intention, surgeons use needles to keep the lips of the wound approximated, often compressing these needles strongly with their figure-of-eight ligatures, and find this measure the most successful means which they can adopt for accomplishing primary adhesion.

The acupressure of arteries, when compared with the ligature of them, appears, as a means of arresting hemorrhage, to present various important advantages: 1st. It will be found more easy, simple, and expeditious in its application than the ligature. 2d. The needles in acupressure can scarcely be considered as foreign bodies in the wound, and may always be entirely removed in two or three days, or as soon as the artery is considered closed; whilst the ligatures are true foreign bodies, and cannot be removed till they have ulcerated through the tied vessels. 3d. The ligature inevitably produces ulceration, suppuration, and gangrene at each arterial point at which it is applied; whilst the closure of arterial tubes by acupressure is not attended by any such severe consequences. 4th. The chances, therefore, of the union of wounds by the first intention should be greater under the arrestment of surgical hemorrhage by acupressure than the ligature. 5th. Pyæmia and surgical fever seem not unfrequently to be excited by the unhealthy suppuration, etc., in wounds which are liable to be set up by the presence and irritation of the ligatures. 6th. These dangerous and fatal complications are less likely to be excited by the employment of acupressure, seeing the presence of a metallic needle has not the tendency to create local suppurations and sloughs in the wound, such as occur at the seats of arterial ligatures. And 7th. Hence, under the use of acupressure, we are entitled to expect both, *first*, the surgical wounds will heal more kindly and close more speedily; and *secondly*, that surgical operations and injuries will be less frequently attended than at present by surgical fever and pyæmia.—*Edinburgh Medical Journal*, January, 1860.

In a subsequent paper (*Med. Times and Gaz.*, Feb. 11, 1860) Dr. Simpson gives some further interesting particulars relative to the practical application of this new mode of arresting hemorrhage.

"For the first application of acupressure to the arrestment of hemorrhage after amputation of the limbs, I am indebted," he states, "to one of the most accomplished and advanced surgeons in this country—my friend, Dr. Greig, of Dundee. Formerly as surgeon to our army in the East, and latterly as surgeon to the large hospital at Dundee, Dr. Greig has enjoyed great opportunities as an operator. His very interesting letters to me on the subject of acupressure indicate the change and struggle which every earnest and ingenuous mind has in setting aside old-established and cherished practices for the adoption of what is new. When I first took the liberty of directing his attention to the subject, as contained in an abstract of a paper on it in the January number of the *Edinburgh Medical Journal*, and asked him to be so good as to test the plan, he wrote me, January 8, 1860, that he could 'see no great difficulty in giving the thing a fair trial.' But he adds: 'Of its general adoption I have great doubts. We have been always taught to look upon the ligature as the only true means of arresting hemorrhage, and this feeling is somewhat difficult to get out of one's mind. Your illustration of fixing a flower in the lapel of the coat by means of a pin, explains the whole thing.'

"CASE 1. Two days afterwards, January 10, Dr. Greig wrote me: 'I performed amputation at the forearm this afternoon in a case of laceration of the hand from the bursting of a gun, and I used the needles instead of ligatures for arresting hemorrhage. Both the radial and ulnar arteries bled freely, but were easily controlled by a needle placed on each, almost half an inch above the cut end. Both needles were, of course, in the palmar or anterior flap, and were applied *quite as easily as a ligature*.' These last words are underscored in Dr. Greig's letter, and show that thus the very first trial of acupressure proved as easy as deligation in the hands of a surgeon who for years had been in the constant practice and habit of applying ligature to arteries for the stanching of hemorrhage in his operations.

"CASE 2. Three days afterwards, January 13th, Dr. Greig again wrote as follows: 'I have had another amputation at the middle of the forearm to-day, and used acupressure with ease and success. The process, so far as I have tried it, is *the simplest* one can imagine; and, unless I see some good reason for changing my mind, it must ultimately come into universal adoption. It is really surprising how very little pressure is required to stop bleeding from an artery. In fact, I had no idea of it till I tried acupressure.'

"On January 20th, Dr. Greig writes: 'Both the cases of amputation in which I used acupressure have done remarkably well. There has been less irritation and less suppuration, and the wounds are healing more kindly than had ligatures been employed. The first case did not close by the first intention, owing to part of the anterior flap having been lacerated by the explosion. The second has gone on as well as could be wished—no fever, no irritation—and the wound is healing by the first intention. What surprises me more than anything else, is the very small amount of pressure which is required to stop arterial hemorrhage. In passing the needle over an artery I do not think it will be found necessary to turn it sharply over the vessel, thereby binding it very tightly to the flap. Such a degree of pressure is by no means required. Less irritation is caused by passing the needle more lightly across the artery, and taking in more tissue along with it.'

"'It is a great comfort also,' Dr. Greig adds, 'to both patient and surgeon, that by acupressure the artery is closed in about forty-eight hours (a large artery may, of course, require a longer time), and all cause of irritation at once removed. In my first case I allowed the needles to remain in for three days; but in future I will consider two days long enough; and, for all I know, perhaps it is longer than is required.'

"'I have now the greatest faith in acupressure. I intend employing it in all kinds of cases that may come under my care, and I will have no fear whatever to use it in my first thigh amputation.'

"'In giving directions for securing the vessel, you advise the surgeon to place the forefinger over its bleeding mouth, etc. Now you will find it much better when you have a flap to keep the finger of the left hand on the skin side and use the thumb. You feel the vessel beating between the thumb and forefinger, and you can introduce the needle in the dark.'

"I heard again from Dr. Greig, on January 23d. 'The amputations (he states) are doing well, and both patients are walking about the wards. Yesterday (he continues), at a case of removal of the mamma, I again used the needles, and easily arrested the hemorrhage from two arterial branches which were spouting freely in the upper or axillary flap. A small branch of an intercostal was the only other bleeding vessel, and torsion was used for it. Nothing could have been easier or more beautiful than acupressure applied in this case, as the procedure was seen in its simplest form—more so than in a flap.' 'I see,' Dr. Greig adds, 'that in France M. Foucher has tried acupressure on the dead subject, and also on a dog. I wonder why he did not try it in an amputation. Nothing can be easier, and if a surgeon uses it once I am sure he will do so again.'

"CASE 3. On January 30th, I had an opportunity, kindly afforded me by Mr. Edwards, lecturer on surgery here, of applying acupressure to stop the bleeding following an amputation of the foot through the first row of tarsal bones. The patient had been unable to work for one or two years, in consequence of an injury to the foot, which led to necrosis, and intractable caries of the anterior row of tarsal bones. He was a strumous subject, and his health was much damaged and broken down by the effects of the disease. Mr. Edwards performed the operation with great dexterity and rapidity, and the four or five vessels that bled were easily secured by as many acupressure needles. The section of the astragalus showed the existence of some disease in its cancellated tissue, which necessitated the removal with the gouge of a portion of its structure. The whole surface of the bone laid bare by the saw and gouge was vascular, and continued to ooze out blood as long as it was exposed. But as the patient was so weak and reduced, Mr. Edwards was anxious to close and stitch up the wound as soon as possible, and before the chloroform-sleep was over. The needles were all removed from the stump about fifty hours after the amputation. During the two subsequent days, there twice occurred a slight oozing of blood from the outer angle of the wound, but not more than enough to redden the moist dressings; and this altogether ceased on the removal of an old ash-coloured clot from the situation above mentioned. To-day, eight days from the date of the operation, the stump is healing kindly, and the patient feels well.

"Case 4. In the preceding three cases of amputation, acupressure was effected by passing the needles from the cutaneous surface of the flap, over the track of the bleeding vessel, and then causing their points to emerge through the skin at some distance. In other words, in all of these cases the cutaneous portion of the flap was used as the point of resistance against which the wounded artery was compressed by the bridge of the needle passing over it. In an instance of amputation of the leg immediately below the knee, performed on January 31st, in the hospital at Carlisle, by my esteemed friend, Mr. Page, I had an opportunity of applying acupressure in another of the modes suggested in my paper on the subject, viz., by compressing the principal bleeding arteries against a neighbouring bone as the resistant point. The cause leading to the amputation was very extensive and old-standing, irremediable disease of the tibia. It is, I believe, generally acknowledged amongst surgeons, that in consequence of the deep situation of the two tibial arteries, between the tibia and fibula, and in proximity to the interosseous ligament, seizure and deligation of these vessels in amputation immediately below the knee are, as a general rule, more difficult to accomplish than the ligature of the arteries cut across in any of the other amputations of the limbs. After Mr. Page had removed the diseased limb in the case in question, I stayed the hemorrhage from the two tibial arteries by compressing and closing them with two needles introduced through the cutaneous surface of the anterior flap, about half an inch above the level of the ends of the amputated bones. The points of these needles after producing the requisite degree of compression of the vessels against the bone, were pushed onwards into the substance of the stump behind. They were not, in this way, visible at any point on the raw surface of the stump. The first needle that I passed failed in producing an adequate degree of compression; but the two next succeeded. Half-way down on the inner surface of the large and fleshy posterior flap, an artery gave rise to some difficulty, for a reason which I had not previously prepared for. I passed a needle through the flap, a few lines on the upper or cardiac side of this bleeding orifice, so as to produce a sufficient degree of compression across the supposed track of the vessel leading to it, but without the effect of arresting the hemorrhage. On sponging the bleeding point, and examining it more carefully, we found that the jet from the artery was coming from below upwards, and not from above downwards. In consequence of this discovery I removed the acupressure needle, passed it through the flap nearer its apex, so as to produce compression two or three lines *below* instead of above the bleeding point—on the peripheral instead of the cardiac side of that point—and the hemorrhage was forthwith arrested. Mr. Page closed the wound most carefully with a large number of metallic sutures. He withdrew the acupressure needles seventy-one hours after their introduction. In a letter which I received from him four days after the operation, Mr. Page says: 'The man continues to eat and sleep well. Indeed,' he adds, 'I never had a patient who suffered less after amputation of the leg; and the condition both of the patient and of the stump is altogether most satisfactory.'

"In addition to the four preceding larger amputations, I have heard of some smaller amputations about the fingers and hands performed during the last month, in which acupressure was successfully used for arresting the subsequent hemorrhage. I saw a case of amputation of one of the fingers, in which my pupil, Mr. Pierce Simpson, operated. The arterial bleeding, as well as some general oozing from the surface of the flap, ceased immediately upon the introduction of an acupressure needle. The finger was irritated, and its vessels full and injected, in consequence of the effects of a severe injury received two weeks previously.

"In one of the extracts from Dr. Greig's letters, the simplicity and facility of the arrestment of arterial hemorrhage by acupressure, as compared with the ligature, is adverted to. Any surgeon accustomed to try both will speedily find acupressure to be far the easier and the more expeditious process of the two. Besides, in applying ligatures, the operator always requires the aid of an assistant; he can himself, however, apply acupressure needles without any such aid. While acupressure is thus far simpler in its application, it will also, I firmly believe, be found also far surer in its results as regards all the chances of obtaining complete reunion of the sides of the flaps by the first intention; and far safer too as far as respects the avoidance of the dire mischances of surgical fever from the absorption of morbid and septic matters formed by local suppurations and sloughs in the depths of the wound. Every ligature applied around the isolated extremity of a bleeding artery inevitably tears and mechanically lacerates the two interior coats of the artery, and afterwards inevitably produces ulceration, suppuration, and local gangrene at the tied point, before the thread can separate and become detached. No such severe and morbid local consequences necessarily result when a bleeding vessel is closed by the temporary contact of a needle."

28. *Non-reducibility of Fractures of the Long Bones.*—M. GOSSELIN observes (*Gaz. Hebdom.*, Nos. 9 and 11, 1859) that so generally do the books lay down the law that all fractures are reducible, that a surgeon is at first surprised when he discovers the fallacy of the statement.

The following is a brief summary of the author's views on the subject:—

1. Even in cases in which there is no displacement, and there can be neither altered direction nor shortening, there may still be deformity, produced by a persistent increase of the size of the limb, at the level of, and to a certain distance above and below, the fracture. This deformity is of no great importance as long as the hypertrophied bone is not painful; but M. Gosselin has met with cases in which pain persisted for years, and kept the patients from their occupations for a far longer period than is usually the case after fracture of the leg. He cites two of these cases.

2. *Muscular atrophy* is another cause of consecutive deformity, and sometimes of irremediable diminution in the strength of the limb. Nothing is more common than muscular atrophy after fracture, both in relation to the fractured segment of the limb, and to the segments above and below this. In almost every case a notable diminution of the whole of the limb is to be observed, except in the instance of fracture of the clavicle, which does not seem usually to be followed by muscular atrophy of the limb. The *cause* of this atrophy has been attributed by some to the compression exerted by apparatus, and by others to the prolonged immovability of the limb. M. Gosselin is disposed to search for the explanation in the diverted nutrition of the parts consequent upon the reparative process of the fracture. At all events, he is of opinion that the atrophy does not depend upon causes from the operation of which a surgeon can shield his patients. Thus far, any means he has tried to remove this condition—as electricity, shampooing, &c.—have been of little avail; but this may arise from the patients not deeming the amount of inconvenience they suffer sufficient to induce them to undergo a prolonged treatment.

3. The displacements consequent on a fracture offer some varieties: 1. The displacement, according to the direction of the limb, can usually be very well

reduced, and it is in relation to it that the intervention of art is usually of utility. Still, the author refers to two cases of fracture of both bones of the leg, in which, in spite of every care, an angular displacement occurred; while certain cases of fracture of the fibula, whatever apparatus may be employed, and whatever care taken, are followed by a little abduction of the foot, and slight elevation of its external border. 2. Displacements according to circumference are rarely irreducible. Still, this is the case with a considerable number of fractures of the neck of the femur, with permanent penetration of the upper into the lower fragment, rotation outwards not being corrigible by other than imprudent attempts. M. Gosselin has likewise met with three cases of fracture of the leg in which irreducible displacement in the circumference has occurred. 3. Of the displacements which take place according to thickness, some are corrected easily, and are not reproduced; others are reproduced again, until prevented by diffused pressure; and others, again, are irreducible, do what we will. In several instances the author has been unable, in fracture of the leg, to place, even with the aid of chloroform, an upper or lower fragment which projected beyond the other. This he attributes to the indentation of the fragments, the teeth not fitting into each other during the efforts at reduction, except as a mere matter of chance. 4. In considering the displacement according to length, besides the part played by muscular action, account has not been taken of the considerable crushing of the bone which results from the reciprocal pressure of the fragments. Here there will be shortening of the bone, with impossibility of restoring it, the shortening even becoming augmented by subsequent absorption.

4. *Fractures near Joints.*—The frequency of fractures near joints, and the great liability to them of subjects aged more than fifty years, has been long known; but M. Vollemier, by introducing the term *penetration* in relation to fractures of the lower end of the radius, MM. Hervey de Chegoin and Robert, by demonstrating such penetration in fractures of the neck of the femur, and M. Trélat, by calling attention to intracondylian fractures of the lower end of the femur, have given quite a new impulse to the study of this description of fractures. But still there are wanting a generalization of these new facts and clinical deductions. In fact, these various fractures resemble each other in their mechanism and their lesions. 1. The fracture of the extremity of a long bone may take the transverse direction, and be unaccompanied by any crushing of the spongy tissue. This is the only fracture, indeed, recognized prior to Vollemier's investigations, but it is the most rare. 2. More frequently one of the fragments becomes so forced into the substance of the other that the penetration remains permanent, the spongy substance of the penetrated fragment being completely crushed. If the two fragments be separated, an accidental cavity will be seen to be hollowed out by the penetrating one, the latter usually presenting an irregular or toothed surface, which enters into such cavity. This variety is especially met with at the cervix femoris, and at the lower end of the radius. 3. In other cases one of the fragments presents the depression and crushing of the spongy tissue, but the other is not lodged in this depression, and is removed from it some millimetres in front or behind—penetration having in fact taken place at the time of the accident, but not being maintained. This disposition is especially met with in the radius, and is more rare than the preceding or subsequent variety. 4. One of the fragments, usually the shorter, may be comminutively fractured, the penetration being more forcible and deeper than in the preceding cases. This variety is observed in stelliform fracture of the radius, in fracture of the neck of the femur, when the great trochanter is fractured at the same time, and in fracture of the lower end of the femur, when there are at the same time intra- and supra-condylian fracture. To these cases a proper clinical import has not been given, and fractures are described just as formerly. But how are we to reduce fractures when their fragments are so solidly penetrated and ingrained as to be scarcely separable, even after death; or when one of the fragments has become shortened by crushing or by comminution? It is evident that surgery can do nothing here, and that the limb must remain enlarged and shortened, and that the action of the joint must be impaired.

5. *Therapeutical Conclusions.*—It is not the author's object to deter from attempts at reduction of fractures. These, he admits, must be made, and, in

case of failure, repeated. But when complete adaptation cannot be thus obtained, and the failure is explicable on one of the grounds mentioned, attempts should not be multiplied, or complicated and expensive apparatus resorted to. In the author's opinion, a careful and attentive surgeon may obtain with the most simple appliances all possible results. The consecutive deformities or imperfections may be inevitable; and it is an illusion to suppose that in all cases they may be completely prevented.—*Med.-Chir. Rev.*, Oct., 1859.

29. *Tracheotomy in Croup.*—The number of the *Edinburgh Medical Journal* for February last contains an interesting paper, by MR. JAMES SPENCE, on this subject, in which he advocates the propriety of the operation in extreme cases, as not only warrantable, but as giving the patient the only chance of life.

He states that out of thirteen cases of croup in which he has operated in the last suffocative stage, six have been saved; and that in cases which subsequently proved fatal, great immediate relief from the agonies of suffocation was afforded. Moreover, he states "that out of the seven fatal cases, one was labouring under the sequelæ of scarlet fever of a severe character, and was completely relieved as regarded the breathing, but sank from persistent vomiting and emaciation: another, F. S., was an acute case of croup supervening on congestive scarlatina with cynanche maligna; in a third, the disease appeared in the progress of measles, also of a congestive character; and a fourth was a child only recently recovered from a severe attack of scarlatina. Now, whilst I would not like to exclude even such cases from the benefit of the temporary relief and the chance of life which tracheotomy affords, still it is evident that the chance in such cases is very much less than in uncomplicated croup, and that the result of such cases must tend unduly to reduce the average success of the operation."

"Tracheotomy," he adds, "cannot, indeed, be expected to be so successful in croup as when performed in œdema glottidis or ulceration of the larynx, or even as in acute laryngitis of adults, because in many cases of croup there is a tendency in the diseased action to spread downwards; on the other hand, what I have observed both as regards the invasion and progress of the disease as shown by the symptoms, and more especially from observation and experience derived from cases in which I have operated, I feel convinced that in many cases of croup the disease is more confined to the larynx than is generally supposed, and that, when it spreads, it does so from the larynx downwards, and does not attack the mucous membrane of the trachea simultaneously with the larynx, or, as some would have us believe, attack the trachea and bronchial mucous surface before affecting the larynx. Post-mortem examinations reveal to us the completed disease, not its progress—that must be derived from observation of phenomena during life; now, to say nothing of the ordinary progress of the symptoms, the immediate relief afforded by the operation in all cases, even in those which subsequently terminated fatally, shows conclusively that even in the fatal cases no disease of the lower part of the trachea could have existed at the time; otherwise the operation could not have afforded the relief it did. As to the presence of bronchitis being a contra-indication to the performance of the operation—a point which I was inclined to insist on in my former communication, though I would not go so far as some continental surgeons, who consider it absolutely favourable—I must modify my former opinion, inasmuch as in most of the successful cases it was present, and when the tube was properly managed the mucus was easily expectorated; and perhaps it may be considered favourable in one sense, as indicating a condition of the mucous membrane less predisposed to the formation of plastic exudations."

With regard to the question of operating at an early stage, Mr. S. says: "It has been plausibly urged, that the success of the operation would be greatly increased if it were performed before the symptoms became very urgent. So far as I can judge from the reports of the discussion in the Academy of Medicine, M. Trousseau's doctrine is to operate as early in the second stage of the disease as possible, when the presence of false membrane or exudation is ascertained from the suppressed and less frequent coughs, the fits of dyspnœa, with intervals of perfect quietude. Now, recoveries by the use of other remedies in this stage, though rare, are not so rare as to entitle us to urge an operation not free from danger in itself, unless we are prepared to show some good grounds for believing that by early operation we could greatly increase the chance of success: 1st. By early relief of the dyspnœa preventing the bad effects of the gradually increasing imperfect aeration of the blood, local pulmonary congestion, or emphysema; or, 2d. By preventing the extension of the membranous or plastic exudation downwards. The former of these indications, I believe, would be met by early operation; the second, and more formidable, I doubt, would not; for the cases I have operated on show that in certain cases the tendency to tracheal and bronchial exudation continues to spread downwards after the operation has afforded a period of relief, if it be not even increased by the presence of the tube. The late Mr. Liston used to object to tracheotomy in croup, on the ground that, if we operated early, there was no physical obstruction to the breathing to warrant it, and that if we delayed till the symptoms were urgent, the tracheal exudation rendered the operation useless. To neither of these propositions can I assent; but I think we are hardly warranted in operating till all remedies have been actively tried and no other chance remains; then there should be no delay. Here, as in many cases, the period of the disease, as regards time, is no criterion. If, in a case of croup, depletion, the warm bath, emetics, counter-irritation, calomel, and other remedies have been actively used without relief—if the hard, ringing cough has become suppressed, and the respiration is evidently imperfect, as shown by the contracted and depressed appearance of the cartilages of the ribs and occasional severe paroxysms of dyspnœa—for my own part, I would say that the operation is fully warranted. When the paroxysms become more and more frequent, and when the dyspnœa is rather persistent than paroxysmal, with turgid or pale lividity, the operation is the little sufferer's only chance for life."

Mr. S. believes that success depends a good deal on the manner in which tracheotomy is performed, and he gives the following directions:—

"There ought to be no attempt at rapidity or brilliancy in this operation; every step should be methodically gone about. First, as regards the position of the infant, the shoulders should be well raised, the head bent moderately backwards and supported by an assistant, who should pass one arm under the pillow behind the neck, so as it were to project or support it forwards, whilst with the other hand he keeps the head fixed with the chin in the middle line as a guide to the surgeon; the arms and legs may be controlled by a small sheet or large towel pinned round the body, the arms placed by the side; and when thus secured, one person can control the movements: care should be taken to see that the teeth are not firmly closed, but that the mouth be partially open and the nostrils kept free.

"The external incision should begin over the cricoid cartilage, and extend downwards exactly in the middle line for at least two inches. In general, two large veins, one on either side of the mesial line and close to it, are seen when the skin is divided; the fascial texture between these, corresponding to the intermuscular line, is readily divided by the point of the knife, and then these veins can be easily drawn aside. Sometimes one crosses the line to join the other, and is embarrassing, and may even require to be divided after being secured by ligatures. But the point most to be attended to is caution after separating the tracheal muscles. If the finger be placed deep in the wound at this stage, the trachea is felt pretty distinctly, and may seem so distinct as to warrant the surgeon entering the bistoury to divide the rings; but I hold this ought not to be done, because not only may there be the substance of the thymus gland flattened under the finger, but deeper, and passing from that gland to the thyroid, there exist numerous vessels which would bleed profusely. I have more than once pointed out this to the gentlemen assisting me at my operations. After separating the lobes of the thymus gland, even after these vessels and the thymus are pushed aside, I clear the rings of the trachea with the knife from loose cellular tissue, so that there may be no obstruction to the entrance of the silver tube when the opening is made in the trachea. On the tube being introduced, the head should be bent slightly forwards.

"The form of the tube itself is important: it ought to be of such a size as will admit air freely without over-distending the trachea, and always double; the inner tube fitting pretty close, but not secured to the outer, either by spring or other fastening, so that it may be easily removed for cleaning, or expelled by the efforts of coughing, if obstructed by mucus.

"In the after-treatment, when there is much bronchial effusion, the use of emetics is very beneficial; but under no circumstances would I now resort to antimony, for its effects are most dangerous, as diminishing the expulsive power, and depressing the patient, inducing sinking. I am glad that my opinion on this head is strengthened by the high authority and great experience of M. Trousseau. In all respects, I find ipecacuan answer better as an emetic, without depressing or leading to dysenteric purging, whilst it induces moderate diaphoresis and allays the febrile condition. M. Trousseau is very decidedly opposed to the use of blisters in these cases, on account of the sloughing which follows. But in this respect I cannot so fully concur; for though I would be far from advocating the use of the ordinary fly-blister, still I have found the application of the liquid blister highly useful in some cases of bronchial complication, and when carefully attended to, I have never seen any bad results.

"In regard to diet, in many cases it is necessary to give beef-tea and wine from the first; but in general I prefer for the first day or two a nutrient non-stimulating diet, such as milk and farinaceous food, and afterwards gradually giving animal food; but in respect to this we must be guided by the condition of each individual patient."

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30. *New method of treating Anthrax.*—Dr. T. R. BLACKLEY relates (*Dublin Medical Press*, Jan. 18, 1860) the following case of anthrax with a view of illustrating a new mode of practice which he recommends:—

About fourteen or fifteen years ago, taking a stroll not far from my residence in the country, I was requested by a poor woman to visit her husband, who lived in a cottage. He was a worn-out man, about 60 years of age, very thin, and with a countenance full of pain and anxiety. On examination, I found he had an enormous anthrax covering the inferior portion of the scapula, and extending from its anterior edge to the spinous process of the vertebræ. My first impression was that the disease was too far advanced for operation; my second, that it was the only course which held out a hope. I had no instruments, save lancets, in my pocket; but, inquiring if there was a razor in the house, was presented with one; with this I made a full and free crucial incision through the tumour. The edges of the wound bled freely for a little, but, that having subsided, I ordered a large poultice to be applied, and his strength to be kept up. On the following day I found the surrounding inflammation had diminished to a great extent, but as I looked on the emaciated frame, and a countenance almost Hippocratic, I felt the poor fellow, with every support, could not survive the separation of the slough.

As I thus reflected, I raised an angle of the skin, stretching the slough which firmly adhered to it, and an idea suggested itself on which I instantly acted. With a forceps and scissors I nipped away the entire slough from the sound parts, going as close as possible to the latter without wounding them, and drawing the edges of the wound into contact with adhesive plaster, I applied a bandage and waited the result. The slough when removed might have filled a wineglass. I thought it would have been larger, as previous to the operation the tumour in extent was the size of a plate, but as much of its fluid contents were removed with the poultice, the size of the dead cellular mass was proportionably diminished. In a couple of days I could scarcely credit the improvement which had taken place. The edges of the wound were united through two-thirds of their extent, and in the course of a week, with the assistance of porter, wine, and animal food, a central wound, not larger than a florin, and on the high road to cicatrization, remained. Had the slough been allowed to separate spontaneously, or even with the aid of turpentine and warm dressings, I question much if such a happy result would have taken place, as nature (at best with all the assistance I could have rendered her) would have required as many days to produce that condition of parts which the scissors effected in as many minutes, and at that critical stage of the disease when a day or two of suffering or relief might make all the difference between *cita mors aut victoria læta*.

31. *Treatment of Cancer by Caustic Potass and Chloride of Zinc.*—By MM. SALMON and MAUNOURY, surgeons to the Hôtel Dieu, at Chartres. After a communication on this matter extending over no fewer than seven numbers of the *Medical Gazette* of Paris, and in which numerous illustrative cases are referred to and fully detailed, these gentlemen come to the conclusion that this method of procedure, in so far at least as tumours of a cancerous nature are concerned, is attended with no greater success than that of treatment by the knife; and that the apparent success of those who have advanced such exaggerated statements as have been published regarding it, seems altogether due to the fact of *cicatrization* following the application of caustic being more rapid than that following the treatment by excision.

In concluding their remarks on the subject, they observe: The favourable reception which has for some years been extended to the operation by caustic may be regarded as a mere reaction against the use of the bistoury, omnipotent as it has always stood in the surgical hospitals of Paris. Such a reception attracted the attention of surgeons; but it was soon found that the real efficacy of the new style of treatment had been greatly exaggerated by its partisans, and that, notwithstanding its advantages in respect to a less amount of inflammatory reaction, the almost total absence of any risk of purulent infection, and the hemorrhage being next to none at all, the recurrence of the disease was more frequent after the employment of caustic than after extirpation by the knife.

No doubt the advantages here mentioned are not without their value. Diminished inflammatory and purulent fever, and the avoidance of hemorrhage, are certainly obtainable by the use of caustic; but for ourselves, who in a great number of cases have practised, and have seen practised, the operation by this means, we consider that in eight cases out of every ten the bistoury is preferable. Especially do we deny the efficacy of caustic in preventing a return of the disease; in seven cases of cancerous tumours in the axilla thus removed, both in the hospital of Chartres and in private practice, have we seen the reappearance of the malady, and a fatal result. All our cases have thus terminated fatally from reaccession of the disease, sometimes in the same situation, sometimes in another part of the body; and according to our recollection of numerous cases thus treated at Chartres by M. Girouard, he was no more successful than we have been.

We therefore completely coincide with the opinion of M. Bonnet, of Lyons, that the Canquoin caustic (*caustique Canquoin*) affords no greater security than does excision against the recurrence of cancer. As we have said, the fact which misleads the more credulous class of patients, and those medical men favourably disposed towards the use of caustic, is the rapidity of cicatrization, especially after the application of the chloride of zinc—the establishment of cicatrization, even over the cancerous tissue itself, being a result of such treatment.

Looking at all the facts relative to the extirpation of cancer by such means, we therefore, along with nearly all surgeons, are disposed to ask, whether, after this operation, one single case of an undoubted and permanent cure can be pointed out. Up to the present time, we deny that any such case has occurred; and we have learned, by experience, to mistrust those observations on cases of the kind which have been so prematurely published—neither the return of the disease nor the death of the patient having had time to take place.—*Edin. Med. Journ.*, Feb., 1860, from *Gazette Médicale*, Nov., 1859.

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32. *Employment of Iodide of Potassium in the Treatment of Aneurisms.*—The *Gazette des Hôpitaux* has lately reported a clinical lecture of Professor BOUILLAUD upon aneurisms, and upon the results of the treatment of aneurismal tumours by the iodide of potassium. One of the patients was a man suffering under an aneurism of the brachio-cephalic trunk and aorta, and the other was a woman with an aneurism of the carotid artery. In the latter case, the iodide of potassium was administered for some days in the dose of a gramme, and afterwards in doses of two grammes for two months. At the end of this period, the tumour, which was at first as large as a pigeon's egg, had diminished so much that it might be considered to have disappeared completely. In the case of the man, the tumour, which was of considerable size, underwent displacement con-

temporaneously with a very well-marked diminution in volume, under the same treatment as that adopted for the woman. At the time of the report, however, the man was still under the treatment by iodide of potassium, and therefore no positive conclusions could be drawn. M. Bouillaud has treated other cases with iodide of potassium. In the case of a man with a large aneurismal tumour at the point of origin of the carotid and subclavian arteries, he found that the swelling was considerably diminished in a few weeks by the use of the iodide. In another patient, treated in the same manner for an aneurism of the carotid artery, he observed at the end of a few weeks that the tumour had almost entirely disappeared. These cases are considered to be sufficiently satisfactory to encourage practitioners in making further trials of the iodide of potassium in aneurismal tumours.—*B. and F. Med.-Chirurg. Rev.*, Jan. 1860.

33. *Treatment of Gonorrhœa and Gleet without Copaiba.*—Mr. WEEDEN COOKE read a paper on this subject before the Harveian Society, Jan. 19, 1860. After referring to Sir Astley Cooper's method of treating gonorrhœa, the author stated his belief that he was only giving utterance to a largely-acknowledged experience when he ventured to affirm that copaiba, in the treatment of gonorrhœa, was not only unnecessary, but that it was in a great many instances injurious, and that in all it was offensive to the last degree. During the last fifteen years at least six thousand cases of gonorrhœa had come under the author's care at the Royal Free Hospital, and he had availed himself of these large opportunities to test all the methods of treatment which had been suggested, in order to arrive at the safest, quickest, most efficacious, and least disagreeable mode of curing this disease. As introductory to the subject of treatment, Mr. Cooke discussed the subject of the cause of chordee, the reason for the scalding of the urine, the distinction between true and spurious gonorrhœa, and the time when infection may or may not be apprehended. The conclusions he arrived at were:—

1. That chordee, in ninety-nine cases out of a hundred, was due to spasm, and not to effusion of lymph; and that cubebs, acting as an antispasmodic, formed the most efficacious remedy for this symptom.

2. That the scalding was the result of the acid urine passing over the highly inflamed mucous surface of the urethra; and that this was to be remedied by the administration of the alkaline carbonates for the purpose of neutralizing the acidity of the urine, thus removing the principal cause of the continuance of the inflammation.

3. That, in all disputed cases, the true gonorrhœa may be known from the spurious by the presence of redness, heat, pain, and swelling, together with a purulent discharge, more or less green and offensive; whilst a discharge produced by connection with a person who has leucorrhœa, or has recently been confined, will not be accompanied with these inflammatory signs, and the discharge will be milky in consistence and colour, differing much from the thick purulent discharge of the veritable gonorrhœa.

4. The time when infection may or may not be apprehended was discussed, in its incubative stage and at its close. A case was given, showing that the disease may be caught from one person, and not communicated to another two nights after, because the purulent discharge had not commenced at the time of the second intercourse. Respecting infection at the close of the disease, the author had been enabled, from experience, to establish as a law for his own guidance, that gleet—*i. e.* a mucous discharge from the urethra, consequent on gonorrhœa—does not set up gonorrhœa in another person; but that, whilst any pus is to be found in the discharge, there is probability of infection.

Passing on to the subject of treatment, Mr. Cooke said that, upon inquiry at the London Custom House, he found that 118,396 pounds of copaiba were admitted into the port of London only during the first ten months of the year 1859. If this be administered at the rate of half a drachm three times a day, and supposing each patient takes it for three weeks, we have here copaiba enough to treat 473,584, or close upon half a million persons, and that in ten months only of the year. Considering how often it fails to cure the disease; how frequently it is rejected by, or at any rate disorders, the stomach; how tell-tale and disagreeable is its odour from the mouth and skin; how occasionally it produces a papular eruption all over the body; and that, in many instances, swelled testicle and stricture may be traced to its irritating influence, while gonorrhœa, rheumatism, and ophthalmia have been attributed to its administration: "considering all these objections," the author remarked, "is it not extraordinary that this disgusting medicine continues so long to hold its ground?" The abortive treatment by strong injections of nitrate of silver had proved a failure, because in some instances inflammation of the bladder had resulted. The treatment by diluents was slow in its action, and not readily employed by persons engaged in active business. That by diuretics was scarcely more successful; whilst the administration of saline aperients was generally attended with an aggravation of the ardor urinæ as well as chordee. The treatment which had been most successful in the author's experience was the chemical treatment by the alkaline carbonates, given with a view of neutralizing the acid in the urine. Thus one great source of irritation was removed from the inflamed urethra, and the subsidence of the inflammation, which nature would effect, was allowed to take place. As auxiliaries, especially when there is œdema of the prepuce, lead lotions, and elevation of the penis against the abdomen, were commended. The inflammation having subsided, and a muco-purulent discharge being left, the author had found, after giving trial to all the injections which have been at any time in vogue, that the chloride of zinc, introduced into this branch of practice by Mr. Lloyd, of St. Bartholomew's, was the most efficacious of any in curing the disease, and that with less discomfort and in a much shorter time than by any other means. Since employing this treatment he had had little, if any, orchitis amongst his patients. The strength of the injection he most commonly employed was two grains to the ounce, but in some instances one grain to the ounce was sufficient. Whilst advocating this treatment in persons of healthy constitution, it was necessary to completely change it in others. In the strumous, in the dyspeptic, in those of dissipated habits, and where the diseased person is an old offender, the alkaline carbonates are not called for, because either the urine is not acid, or the inflammation does not run high. In such cases the tincture of iron, or sulphuric acid and bark, or gentian, or calumba, may be advantageously employed from the commencement; and the chloride of zinc injection, in these cases, is also of the utmost value in rapidly overcoming the disease.

Respecting diet, the author considered that after the subsidence of the inflammatory symptoms scarcely any restriction need be enforced, and that beer or wine in moderate quantities may be advantageously used by those who are accustomed to these beverages. He had found long-established cases of gleet yield readily to the chloride of zinc injection, accompanied with tonic treatment and generous living.

In conclusion, he would rejoice if the treatment he had found so serviceable should be followed out by others, and thus assist in banishing altogether from surgical practice the use of so nauseous a drug as copaiba.—*Med. Times and Gaz.*, Feb. 4, 1860.

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34. *Treatment of Blennorrhagia by Vinum Colchici and Tincture of Opium.*—Dr. Eisenmann, of Würzburg, states that he once had occasion to prescribe a combination of vinum colchici and tincture of opium for an officer affected with rheumatic conjunctivitis, and a few days afterwards he was informed that the medicine had cured not only the ophthalmia, but also a blennorrhagia, of which no mention had been previously made. He was surprised at this result; but he resolved to profit by it, and to try the same treatment in other cases. He therefore prescribed the medicine for a girl affected with blennorrhagia, and was again surprised that a permanent cure was effected in a few days. Nothing was ordered externally, except frequent applications of tepid water. Subsequently, several cases of blennorrhagia in the male presented themselves, and were treated in the same manner. The dose employed was eighteen to twenty drops, three times a day, of a mixture consisting of twelve grammes of vinum colchici with two grammes of tincture of opium; milk was ordered as the principal article of food, and absolute rest was enjoined. All the cases of blennorrhagia thus treated were cured without exception in a few days, especially when the treatment could be adopted at the commencement of the affec-

tion, and none resisted longer than a week. The observations of Dr. Eisenmann have been confirmed by those of M. Collin, of Dresden, who treated ten cases of blennorrhagia with the greatest success by the mixture of vinum colchici and laudanum. The patients did not recover so rapidly as those treated by Dr. Eisenmann; but the latter physician attributes the difference to the probable inferiority of the drugs employed, and to the fact that the patients did not consult a medical man at a sufficiently early period.—*B. and F. Med.-Chirurg. Rev.*, Jan. 1860, from *Bull. Gén. de Thérapeutique*, May 15, 1859.

35. *Falls from Great Heights followed by very Slight Injury.*—Mr. GEORGE MALLETT relates (*British Medical Journal*) the two following remarkable examples of this:—

CASE 1. Occurred about sixty years ago; and about twenty-five or twenty-six years since, it came to my knowledge under the following circumstances:—

At the period last named, I was requested to visit a poor man, who had been suffering severely for four days. I found him in great agony from retention of urine, none of which had passed from the bladder for four days. Many ineffectual attempts had been made for his relief by an irregular practitioner, but, unfortunately, he had been unable to introduce the catheter. The patient was about seventy years old, and presented the following symptoms: The skin was hot; the face red, and much emaciated; the pulse was rapid and very feeble; the mouth and tongue hot, parched, and covered by a thick coating of dark fur—in fact, presenting such an appearance as would be expected from so long a retention of urine. With great difficulty, a large catheter was introduced, and from five to six pints of urine were drawn off: the first was very ammoniacal, and the latter portion semipurulent and bloody. The catheter was introduced twice a day for three days, when the man died.

The day before his death he was very cheerful; and, in a jocular manner, said, "that in his younger days he had met with a bad fall, but he feared he had then suffered a worse one, as he had fallen into the hands of the doctor." He explained himself by stating, that when placing some of the masonry upon the highest part of the tower of a church, called St. George's, in this town, his foot slipped, and he was precipitated from the top to the bottom, the distance being at least one hundred and twenty feet; and that the fall was uninterrupted by any intervening scaffolding, so as to diminish the impetus of the descent. He added, that he was so little injured, that he was able to resume his occupation in a few days.

Upon making subsequent inquiry, I found his story to be strictly correct, with the addition, that his head fell upon some sheet lead, which was extended upon the ground; and that the force was so great that a deep impression was made upon the lead by the skull.

CASE 2. On December 8, 1859, I was called upon to visit another curious case, which recalled to my recollection the notes I had made of the preceding one.

A collier, aged about fifty, was descending a pit or coal-mine in a way frequently followed; but certainly such a mode of descent ought not to be permitted, as it is unquestionably dangerous. The descent is made by placing one foot in a ring or kind of stirrup, at the same time holding the rope with one or both hands. He had not descended more than four or five yards, when by some accident, which he cannot explain, his foot was knocked or slipped out of the ring, and his hold of the rope at the same time giving way, he fell at once to the bottom of the pit, a distance of at least one hundred and thirty-five feet. There was nothing to break or mitigate the force of the fall. He was found alive, but groaning, and constantly muttering, "O my children! O my children!" He was brought up; and I saw him about an hour after the accident. He appeared to be moribund. The pulse was not to be felt at the wrist, the extremities were cold, and respiration very difficult and painful. The slightest motion gave exquisite pain, and I could not attempt to ascertain what amount of injury the trunk had sustained. There was some contusion with extravasation of blood at the posterior part of the right thigh, a slight laceration of the scalp, and the knuckles of both hands were slightly excoriated and swollen, probably from his instinctively throwing out his arms in the vain hope of saving himself, and so striking the sides of the pit. These were the only injuries I could discover, as all the bones of the extremities were sound. He was placed in bed in the easiest position, which was lying on his back, but rather inclining to the right side. Bottles filled with hot water and hot bricks were applied to the extremities; and brandy and water was ordered to be given every half hour, until warmth was restored.

I then left him, and certainly did not expect to see him alive again; but, to my surprise, on the following morning, I found him much improved. His pulse, although still feeble, was regular and distinct; warmth had also returned to the extremities. The bladder had emptied itself naturally. The chief complaint now appeared to be on the right side; a careful examination of which showed that three or four of the lower ribs were fractured, which, upon the slightest movement, caused great suffering, and rendered the breathing so difficult, as to threaten instant suffocation. The chest was bound up; and beef-tea, etc., were ordered.

On the third day the bowels were moved, the pain diminished, and the respiration easier. From this time the improvement was gradual, and without interruption; so that, on December 25th, he was so much improved as to be able to walk down stairs, and the only remaining complaint was a slight pain at the side when drawing a deep inspiration.

I have said little or nothing respecting the treatment, simply because little or no treatment was required. It was one of those numerous cases of which it has been justly said, "Nature cures, and man has the credit."

Undoubtedly, it is difficult to conceive, under any circumstances, how the human frame could without greater injury have sustained such shocks as must have been inflicted upon them in these cases. It would have been natural to suppose that the momentum or force acquired by the bodies falling through so great a space, would have been sufficient to dash them into mangled and disorganized masses, more especially as they could not have fallen upon substances more unfavourable—lead in the one case and the solid rock in the other.

OPHTHALMOLOGY.

36. *Antiphlogistic Powers of Morphia.*—Dr. Z. LAURENCE relates (*Med. Times and Gaz.*, Dec. 31, 1859), several cases of sclerotitis and of iritis, treated by morphia.

These cases he considers "establish an important practical fact, viz., that morphia is *per se* a powerful antiphlogistic,[1] capable of curing these acute inflammations of the eye, in which up to the present time bloodletting, blistering, and mercurialization have been considered necessary. As regards loss of blood, all will be agreed on the propriety of dispensing with it, where it can be done so with safety. Again, how constant an occurrence is it to see paroxysms of acute inflammations for a time apparently relieved by bloodletting, till the subsequent vascular reaction sets in, but to recur again and again, and require as many repetitions of this same objectionable remedy. I would further ask surgeons and physicians, What evidence have they that in the combination of mercury and opium given with a view of 'putting the patient under the influence of mercury,' as it is termed, it is not really the *opium* which does the good, and that the mercury and its action on the mouth may not be, to say the least, useless![2] And I would finally ask the physicians of this country to test the pow-

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[1] In all the cases mentioned, the patients had been using warm fomentations to the eyes before applying at the hospital.

[2] Again, mercury is presumed to have an "absorbing power" over plastic effusions, such as occur in acute iritis: here, too, it is a fair question whether the absorption of the inflammatory exudations is not rather a natural process, supervening on the cessation of the inflammation (such as we daily see in the absorption of divided cataracts, after the operation by solution, as soon as the inflammatory consequences of the operation have passed off), than any, if I may be allowed the expression, "mercurial" process?